

REMARKS/ARGUMENTS

Claims

Claims 1-32 were pending in this application, of which claims 1-13, 32 and 33 are subject to restriction. Claims 16 and 17 have been cancelled herein. Claim 14 has been amended herein to incorporate further description of the method of conducting a binding assay. Claim 28 has been amended to grammatically clarify the listing of alternate embodiments. Support for the amendment to claim 14 can be found in original claim 16 as well as Applicants' Specification at paragraphs 114-119, among other places.

Response to Restriction Requirement

Applicants confirm election of Group II (claims 14-31). Accordingly, claims 1-13, 32 and 33 are withdrawn herein.

Claim Rejections

Claim 28 stands rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 14-16, 18-22, and 28-30 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Van Dam et al., (US 2003/0008411). Claims 17, 23-26, and 31 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Van Dam et al. Claim 27 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Van Dam et al. in view of Raillard et al., (US 2002/0102577 A1). These rejections are respectfully traversed for at least the reasons which follow.

Rejection Under 35 U.S.C. §112, Second Paragraph

The Office Action rejected claim 28 under 35 U.S.C. § 112, second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Office Action states that claim 14 recites only a single reagent and a single sample.

Applicants respectfully draw the attention of the Office to language of claim 14 which using the “comprising” term does not limit the method to a single reagent and a single sample. Applicants additionally wish to point out that claim 28 has been amended herein to clarify that it recites a list of alternate embodiments of a binding assay. Accordingly, Applicants do not believe that claim 28 is indefinite under 35 U.S.C. §112, second paragraph and respectfully request withdrawal of the rejection.

Rejection Under 35 U.S.C. §102(e) (Van Dam et al.)

Claim 14, as amended, recites a method for conducting binding assay utilizing a microfluidic device configured to allow for the deposition of a ligand on a surface through a first flow channel, the closing off of the first flow channel, the introduction of a sample solution through a second flow channel, the recirculation of the sample solution through a looped flow channel, and the detection of the binding of an anti-ligand in the sample to the ligand.

Van Dam et al., teaches a solid support and a plurality of first flow channels intersecting a plurality of second flow channels. The arrays have valves that can isolate the solid support area at the intersection of the flow channels. Van Dam discloses a method of compound synthesis by introducing reactants into the microfluidic device through various configurations. Van Dam et al., does not teach or suggest a method of conducting a binding assay wherein sample solution is recirculated. Claim 16 has been cancelled herein making the rejection of that particular claim moot. Claims 15, 18-22, and 28-30 ultimately depend from claim 14 and incorporate the limitations of claim 14. For at least this reason, Van Dam et al., does not teach every limitation of the claimed method in claims 14, 15, 18-22, and 28-30. Accordingly, Applicants respectfully request withdrawal of the rejection.

Rejection Under 35 U.S.C. §103(a) (Van Dam et al.)

The Office Action rejected claims 17, 23-26, and 31 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Van Dam et al.

Claims 17, 23-26, and 31 ultimately depend from claim 14. Claim 14, as amended, recites a method for conducting binding assay utilizing a microfluidic device

configured to allow for the deposition of a ligand on a surface through a first flow channel, the closing off of the first flow channel, the introduction of a sample solution through a second flow channel, the recirculation of the sample solution through a looped flow channel, and the detection of the binding of an anti-ligand in the sample to the ligand bound to the solid substrate. As noted above, Van Dam et al., does not teach or suggest a binding method involving the recirculation of a sample over a ligand deposited on a solid substrate and the detection of the ligand/anti-ligand binding. For at least this reason, it is submitted that Van Dam et al., does not make claim 14 obvious and therefore would not make dependent claims 17, 23-26, and 31 obvious. As such, withdrawal of this rejection is respectfully requested.

Rejection Under 35 U.S.C. §103(a) (Van Dam et al. in View of Raillard et al.)

Claim 27 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Van Dam et al., in view of Raillard et al.

As discussed above, Van Dam et al., provides no teaching or suggestion of Applicants' claimed binding method as amended herein. Raillard et al., provides no teaching or suggestion that remedies the deficiencies in the Van Dam et al., reference that have been noted earlier. Accordingly withdrawal of the rejection is requested.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,

/Patrick M. Boucher/

Patrick M. Boucher
Reg. No. 44,037

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PATENT

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 303-571-4000
Fax: 415-576-0300

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